tive. **METHODS:** We compared ipilimumab treatment for advance melanoma with other drugs for advanced cancer that met inclusion criteria including: (1) positive phase three study with overall survival as primary or secondary aim, (2) authorized by Chilean government agency, and (3) verifiable price in the private market. We performed a cost – efficacy analysis, using local prices obtained from published local sources to calculate an average cost to progression. Time to progression was obtained from published clinical trials. Mean overall survival improvement was used as the efficacy metric. Cost – efficacy outputs were plotted and compared. All costs are presented in 2014 USD. Additionally, a survey to Chilean oncology specialist was designed to obtain qualitative information about their experience(s) with ipilimumab for the treatment of metastatic melanoma patients in Chile. **RESULTS:** Nineteen drugs met inclusion criteria with 28 advance cancer indications. The average cost per month of mean survival improvement was estimated at $24,802 (range 1,737 – $91,256). We estimated the cost per additional month of mean survival improvement at $13,122 and $14.843 for first and second line treatment with ipilimumab respectively. Based on the survey, local expert opinion unanimously stated that ipilimumab is the best treatment alternative for patients with advanced melanoma. **CONCLUSIONS:** Compared with other innovative drugs for the treatment of advanced cancers, the cost per mean survival improvement with ipilimumab was below the average market value and may provide good value for money from a third payer perspective in Chile. Based on the survey, specialists noted ipilimumab as the best treatment option for Chilean patient with advanced melanoma.

PCN71

BEVACIZUMAB FOR FRONT-LINE TREATMENT OF EPITHELIAL OVARIAN, FALLOPIAN TUBE OR PRIMARY PERITONEAL CANCER PATIENTS WITH HIGH RISK OF RELAPSE: A COST EFFECTIVE OPTION FOR CANADIAN PATIENTS

Ghatage P[1], Wright EJ[2], Martin Nunez I[2], Yin L[2], Ray J[3]
[1]*University of Calgary, Calgary, AB, Canada,* [2]*Hoffmann-La Roche, Mississauga, ON, Canada,* [3]*F. Hoffmann-La Roche, Basel, Switzerland*

OBJECTIVES: In the ICON7 randomized controlled trial, Oza et al. reported that the 502 front line ovarian cancer patients who were at a high-risk of relapse, that is patients with stage III suboptimal debulking, stage III unresectable or stage IV disease, could benefit most effectively from the addition of bevacizumab (7.5mg/kg) to chemotherapy (carboplatin, paclitaxel), compared to chemotherapy alone in the front line setting. The objective of this study is to investigate the cost effectiveness (CE) of this proposed change in treatment practices. **METHODS:** Long-term PFS and OS were predicted using log-logistic time-to-event parametric functions over a time horizon of 10 years. Canadian PFS health state utility values were obtained from the mapping of EQ5D scores from ICON7's high risk patient population. Post progression utility values were derived from Naik et al (2014) Canadian study. The cost inputs, including standard resource use practices, for this CE model were informed from public sources, gynecological oncology experts and ICON7. An annual 5% discount rate was applied to both efficacy and costs. A probabilistic sensitivity analysis (PSA) as well as one-way sensitivity analyses were conducted. **RESULTS:** The ICON7 high-risk patients receiving bevacizumab plus chemotherapy had a mean LY gain of 5.8 months compared to patients on chemotherapy alone, and a mean QALY gain of 4.5 months. This resulted in an ICER of $74,084CAD per LY gained and $96,261CAD per QALY gained. 55% PSA simulation of the QALY ICERs were at $100,000CAD or less. **CONCLUSIONS:** Although no formal willingness-to-pay threshold exists for health technology assessments in Canada, $100,000CAD has been estimated for oncology drugs. At a $100,000CAD threshold, bevacizumab in addition to chemotherapy provides a cost-effectiveness alternative for high-risk patients (i.e. stage III suboptimal debulking, stage III unresectable or stage IV) with ovarian cancer in the front line setting.

PCN72

INDIRECT COSTS AMONG METASTATIC BREAST CANCER PATIENTS RECEIVING ERIBULIN

Wan Y[1], Copher R[2], Corman S[1], Abouzaid S[2], Gao X[1]
[1]*Pharmerit International, Bethesda, MD, USA,* [2]*Eisai, Inc., Woodcliff Lake, NJ, USA*

OBJECTIVES: This study examined indirect costs in terms of productivity loss among patients who received eribulin vs. other commonly used chemotherapies in the treatment of metastatic breast cancer (MBC). **METHODS:** The MarketScan Health and Productivity Management Database (2008-2012) was used. Patients who initiated eribulin, or received single-agent gemcitabine/capecitabine/vinorelbine as the last chemotherapy during the index period (July 2008-Nov 2012) were defined as each corresponding study cohort. Adult MBC patients eligible for ≥1 month employee benefits of short-term disability (STDI) were identified. Difference in STDI days was compared between study cohorts using Wilcoxon-rank-sum-test. STDI-related costs were estimated by multiplying leave days by median weekly wages. Two-step generalized linear models were used to estimate adjusted indirect costs by controlling for age, payer, region, comorbidities, prior chemotherapy, and hormone therapy. **RESULTS:** A total of 43 patients receiving eribulin, 99 gemcitabine, 54 vinorelbine, and 303 capecitabine were eligible for STDI (mutually exclusive). Eribulin patients had either similar (vs. gemcitabine or vinorelbine) or more (vs. capecitabine) chemotherapy agents prior to initiating index treatment. Eribulin patients had either numerically lower or similar STDI days per-patient-per-month compared to those receiving other therapies (6.2±10.8 vs. 8.8±11.0 [gemcitabine], P=.055; 7.1±10.3 [vinorelbine], P=.201; 6.1±9.2 [capecitabine], P=.295). In addition, eribulin (vs. gemcitabine) patients were less likely to have any STDI leave (30% vs. 53%, P=.014). The adjusted mean indirect costs associated with STDI per-patient-per-month were $720 (95% CI: $470-$1,102), $944 (95% CI: $595-$1,175), $837 (95% CI: $744-$1,198) and $635 (95% CI: $536-$753) for eribulin, gemcitabine, vinorelbine and capecitabine patients, respectively. **CONCLUSIONS:** Productivity loss, as measured by utilization of STDI and associated costs, tended to be lower in MBC patients treated with eribulin vs. gemcitabine and similar to vinorelbine or capecitabine.

PCN73

COST-EFFECTIVENESS ANALYSIS OF ARSENIC TRIOXIDE FOR THE TREATMENT OF IN PATIENTS WITH ACUTE PROMYELOCYTIC LEUKEMIA

Tallman M[1], Lo-Coco F[2], Barnes G[3], Kruse M[4], Wildner R[4], Martin M[5], Mueller U[6], Tang B[3], Pathak A[3], Weinstein MC[7]
[1]*Memorial Sloan Kettering Cancer Center/Weill Cornell Medical College, New York City, NY, USA,* [2]*University Tor Vergata, Rome, Italy,* [3]*Teva Pharmaceutical, Frazer, PA, USA,* [4]*Optum, Waltham, MA, USA,* [5]*MAPI, Uxbridge, UK,* [6]*Teva Pharmaceutical, Ehrenkirchen, Germany,* [7]*Harvard T. H. Chan School of Public Health, Boston, MA, USA*

OBJECTIVES: Acute promyelocytic leukemia (APL) is a distinct subtype of acute myeloid leukemia (AML) with approximately 1,000 to 1,500 new cases diagnosed each year in the United States (US). Trisenox (arsenic trioxide, ATO) is currently licensed for the treatment of patients with APL who are refractory to, or have relapsed from previous treatment with all-trans retinoic acid (ATRA) and anthracycline-based chemotherapy. This analysis evaluated the cost-effectiveness of ATO+ATRA in the treatment of newly diagnosed low-to-intermediate risk APL in adult patients, compared to two other widely used regimens: ATRA+Ara-C+chemotherapy, and ATRA+Idarubicin (AIDA). Cost-effectiveness was measured as incremental cost per quality-adjusted life year (QALY) gained and per incremental cost per life year (LY) saved from a third-party payer perspective in the US. **METHODS:** A Markov cohort model with monthly cycles and four health states (1st-line stable disease, 2nd-line stable disease, 2nd-line disease event, and dead) was developed. Patients in the model begin treatment at age 45 and were followed until death. Eight months duration of ATO+ATRA was compared to either 15 months of ATRA+Ara-C+chemotherapy or 33 months of AIDA. Efficacy data (event-free survival.overall survival) were obtained from key clinical trials. Quality of life/health utility data were obtained from the literature. Costs were obtained from standard US data sources. Transition probabilities were estimated by calibrating the model to event-free and overall survival Kaplan-Meier curves for each treatment. Deterministic and probabilistic sensitivity analyses were conducted. **RESULTS:** Compared to ATRA+Ara-C+chemotherapy, ATO+ATRA had incremental cost effectiveness ratios of $5,900/QALY gained and $4,800/LY saved. ATO+ATRA weakly dominated AIDA (had a lower incremental cost-effectiveness ratio and more QALYs and LYs) in newly diagnosed patients. The results were robust to sensitivity analysis. **CONCLUSIONS:** The shorter and better-tolerated regimen of ATO+ATRA is a highly cost-effective strategy compared to ATRA+Ara-C+chemotherapy or AIDA in the treatment of newly diagnosed low-to-intermediate risk APL patients.

PCN74

COST-EFFECTIVENESS OF RADIUM-223 DICHLORIDE (RADIUM-223) IN ALSYMPCA: A COST-EFFECTIVENESS ANALYSIS OF RADIUM-223+BEST STANDARD OF CARE (BSOC) COMPARED WITH PLACEBO+BSOC IN TREATMENT OF CASTRATION-RESISTANT PROSTATE CANCER (CRPC) AND SYMPTOMATIC BONE METASTASES IN CANADA

Henricks P[1], Cislo P[2], Zhan L[2], Beaudet A[3], Grabbi E[4], Lloyd A[4], Fleshner N[5], Chin W[6]
[1]*Bayer Inc, Toronto, ON, Canada,* [2]*Bayer HealthCare, Whippany, NJ, USA,* [3]*IMS Health, Basel, Switzerland,* [4]*IMS Health, London, UK,* [5]*Princess Margaret Hospital, University Health Network, Toronto, ON, Canada,* [6]*ILEX Consulting, Toronto, ON, Canada*

OBJECTIVES: In ALSYMPCA, radium-223+BSoC significantly prolonged overall survival by 3.6 months (HR=0.70; 95% CI, 0.58-0.83; P<0.001). Analysis of prospectively collected medical resource utilization (MRU) data from ALSYMPCA demonstrated that radium-223+BSoC vs BSoC reduced overall MRU, including number of hospitalization days/patient/year (8.1 vs 14.6; P<0.001). An existing cost-effectiveness analysis (CEA) model was modified by incorporating the prospective MRU data from ALSYMPCA to evaluate their effect on estimated cost-effectiveness of radium-223+BSoC vs placebo+BSoC in Canada. **METHODS:** A Markov model was developed with 5 health states, reflecting disease progression and SSEs. The Canadian payer perspective was used. Quality of life data were from ALSYMPCA; cost inputs were from recognized Canadian sources. Costs and outcomes were discounted at a 5% annual rate. Model time horizon was 5 years. **RESULTS:** Incorporating MRU data reduced the incremental cost estimate by $11,065 relative to CEA without MRU data and improved the incremental cost-effectiveness ratio for radium-223+BSoC vs placebo+BSoC by ~35% to $73,408 ($20,098 incremental cost, 0.274 quality-adjusted life years [QALYs] gained), substantially lower than the frequently referenced, although not explicitly stated, Canadian cancer drug threshold ($100,000/QALY). Sensitivity analyses demonstrated robustness of cost-effectiveness results. Patient management costs were affected primarily by differential hospital utilization between treatment groups. **CONCLUSIONS:** Including directly observed MRU data in this model markedly improved the impact of radium-223 vs modeled benefits alone, confirming its cost-effectiveness as a treatment for CRPC with symptomatic bone metastases and no visceral metastases. Reduced hospital utilization with radium-223 may be driven by delays in time to symptomatic skeletal event (SSE) and reduced hospitalization days/patient/year after SSE (Cislo et al. ASCOQCS 2014).

PCN75

COST-EFFECTIVENESS ANALYSIS OF FEMALE HUMAN PAPILLOMAVIRUS VACCINATION IN MAINLAND CHINA

Gai R
National Center of Child Health and Development, Tokyo, Japan

OBJECTIVES: To evaluate cost-effectiveness of different HPV vaccination as alternatives or additions to the current screening program to prevent and control cervical cancer in Mainland China. **METHODS:** A Markov model was developed for a cohort of 100,000 12-year-old girls to simulate the natural history of low risk and high risk to HPV infection and its progress to cervical cancer or genital warts. Three recommended screening (protocol 1. Liquid-based cytology test + HPV DNA test; protocol 2. Pap smear cytology test + HPV DNA test; protocol 3. Visual inspection with acetic acid) and two types of HPV vaccination programs (bivalent and quadrivalent vaccines) were incorporated to the two kinds of HPV vaccines. Input data were obtained from literature review, national databases, and a field study. Sensitivity analyses